

**COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY**

Proceeding by the Department of)	
Telecommunications and Energy on)	
its own Motion to Implement the Federal)	D.T.E. 03-60
Communications Commission's <u>Triennial</u>)	
<u>Review Order</u> Regarding Switching for)	
Mass Market Customers)	

PANEL TESTIMONY ON BEHALF OF
BROADVIEW NETWORKS, INC., BULLSEYE TELECOM,
INFOHIGHWAY COMMUNICATIONS CORPORATION,
MCGRAW COMMUNICATIONS, INC. AND
METROPOLITAN TELECOMMUNICATIONS, INC.
("CLEC COALITION")

AND DSCI CORPORATION

PANELISTS:

PETER KAROCZKAI, SENIOR VICE PRESIDENT, INFOHIGHWAY COMMUNICATIONS CORPORATION

MICHAEL HOU, SENIOR VICE PRESIDENT, BROADVIEW NETWORKS, INC.

SEAN DANDLEY, PRESIDENT AND CHIEF EXECUTIVE OFFICER, DSCI CORPORATION

1 **Q. Mr. Karoczkai, please state your name, title and business address,**
2 **educational background and related experience for the record.**

3
4 A. My name is Peter Karoczkai. I am Senior Vice President – Sales and Marketing
5 of InfoHighway Communications Corporation (“InfoHighway”). My business
6 address is 1333 Broadway, Suite 1001, New York, New York 10018. I have a
7 Bachelor of Science degree in Business Administration from the University of
8 North Carolina at Greensboro, and a Master of Business Administration in
9 Marketing and International Affairs degree from New York University. My
10 current responsibilities include managing InfoHighway’s sales and marketing
11 functions, including channel development, pricing and product development. In
12 addition, I am involved in the company’s business development activities and
13 certain, mostly major, regulatory proceedings. Prior to joining InfoHighway, I
14 was Vice President of Marketing and Product Management for Verizon’s
15 (previously Bell Atlantic) Wholesale Services business unit. My responsibilities
16 included the implementation of the federal Telecommunications Act of 1996
17 (“Act”) and the opening of Verizon’s network for local competition. In this role, I
18 managed the product development efforts for Resale, UNE-P, Collocation, EELs,
19 Shared Transport, Unbundled IOF, and Unbundled Loops. I have over 15 years
20 of experience in telecommunications, and have held a variety of positions in
21 marketing, product management, channel and business development, sales and
22 operations.

1 **Q. Mr. Hou, please state your name, title and business address, educational**
2 **background and related experience for the record.**

3 A. My name is Michael Hou and my title is Senior Vice President of Broadview
4 Networks, Inc. (“Broadview”). My business address is 744 Broad Street, 10th
5 Floor, Newark, New Jersey 07102. I have Bachelor of Science and a Master of
6 Science degrees in Electrical Engineering and Computer Science, both with
7 Honors, from M.I.T. My current responsibilities include managing Broadview’s
8 Wholesale Services business, which includes providing network, provisioning and
9 other system capabilities for other carriers, including managing the hot cut
10 process for AT&T. I have over 15 years of experience in the telecommunications
11 business and have held a variety of positions in carrier sales, product
12 management, finance, regulatory, systems development, operations, and network
13 planning.

14

15 **Q. Mr. Dandley, please state your name, title and business address,**
16 **educational background and related experience for the record.**

17

18 A. My name is Sean Dandley. I am President and Chief Executive Officer of
19 DSCI Corporation (“DSCI”). My business address is 1050 Waltham Street,
20 Lexington, Massachusetts 02421. DSCI is a competitive local exchange
21 carrier (“CLEC”) operating in most states in the Northeast, including in

1 Massachusetts, with offices in Lexington, Massachusetts and Tilton, New
2 Hampshire. DSCI offers a suite of local, long distance, Internet and data
3 solutions to commercial, nonprofit and other organizations. I have a Bachelor
4 of Administration degree in Journalism from the University of Massachusetts
5 and a Master of Business Administration in Marketing from Bentley College.
6 My current responsibilities include overall management and leadership of
7 DSCI's telecommunications business and related sales, marketing, business
8 development, product development and regulatory activities. Prior to joining
9 DSCI, I was Senior Vice President for Digital Broadband Communications,
10 Vice President of Sales for Eastern Telecom, and Operations Manager for
11 Protocol Communications. I also have 11 years of service with the
12 Massachusetts National Guard, attaining the rank of Captain.

13
14 **Q. On whose behalf are you testifying?**

15
16 **A.** We are testifying on behalf of a coalition of competitors who provide service in
17 Massachusetts: Broadview Networks, Inc., BullsEye Telecom, InfoHighway
18 Communications Corporation, McGraw Communications, Inc. and Metropolitan
19 Telecommunications, Inc., as well as on behalf of DSCI Corporation.

20
21 **Q. What is the purpose of your testimony?**

1 A. The purpose of our testimony is to address an argument often raised by Verizon
2 New England Inc. (“Verizon”) and other incumbent local exchange carriers
3 (“ILECs”) that the availability of UNE-P in a given market discourages
4 investment in “facilities.”¹ There is no evidence that unbundling local switching
5 discourages the deployment of new facilities or the introduction of advanced
6 services. For its part, the Federal Communications Commission (“FCC”), in the
7 Triennial Review Order (“TRO”) *rejected* the incumbents’ claims that unbundling
8 discourages investment, finding no conclusive evidence in the voluminous record
9 that supports the ILECs’ claims. To the contrary, unbundling the legacy network
10 encourages competition, and the more competition that exists for *today’s*
11 customers, the more investment will occur to retain these customers in the *future*
12 as their needs and options change. Although we would *also* disagree with the
13 incumbents that unbundling discourages them from investing in new technologies,
14 it is important to leave that debate for a future date. The issue here concerns
15 access to the legacy circuit switched network to offer the most basic of
16 telecommunications services to mass market consumers.

17
18 **Q. Please summarize your testimony.**

¹ See e.g., Brief for ILEC Petitioners and Supporting Intervenor at 11, *United States Telecom Ass’n v. FCC*, No. 00-1012 (D.C. Cir. Dec. 1, 2003) (“To the extent competitors are not using [] intermodal and intramodal alternatives even more widely to serve the mass market, it is because the availability of UNE-P at TELRIC rates creates a massive disincentive to facilities-based competition for mass-market customers.”).

1

2 A. Verizon would greatly benefit financially by a shift of UNE-P lines to
3 UNE-L because Verizon expects to “win-back” most, if not all, of the
4 CLEC UNE-P lines to its retail services, thereby strengthening its local
5 monopoly. If the lines were to shift to another CLEC’s network via UNE-
6 L, Verizon would see a significant reduction in its wholesale revenues.

7

8 Verizon’s network would be significantly disrupted by a sudden shift of a
9 large number of UNE-P lines to UNE-L. Verizon’s interoffice network is
10 designed to handle the majority of traffic from its retail and UNE-P lines
11 through a network of first-route and final trunk groups starting at the
12 originating end-office, with the filter of the initiating end-office directly
13 terminating all traffic to nearby subscribers without ever relying on
14 interoffice facilities. If the base of UNE-P lines were shifted to UNE-L,
15 this traffic would re-enter the Verizon network at a different point in the
16 interoffice network, increased by the minutes that must be returned to their
17 initial end-office for termination, thus requiring augments to the interoffice
18 network.

19

20 The deployment of competitive advanced services to the consumer/small
21 business market would be reduced substantially without access to
22 unbundled local switching, in direct conflict with the *only* facilities-based

1 goal in the Act (i.e., to encourage the deployment of *advanced*
2 technologies). With the elimination of line-*sharing* by the FCC, the only
3 meaningful vehicle to market competitive DSL services to smaller users is
4 through line-*splitting*. The effect has been to reduce the addressable
5 market for a competitive xDSL provider (such as Covad) from the 5.1
6 million lines served by Verizon, to the approximately 698,000 lines served
7 by UNE-P providers. If UNE-P is eliminated, the mass market closes
8 entirely.

9

10 **Q. Before you address each of these points in more detail, does it make sense for**
11 **an incumbent to want its competitors to develop duplicative networks?**

12

13 A. No, not at all. The Department should be highly suspicious of any claim by
14 Verizon that it supports the elimination of unbundling so as to “encourage” CLEC
15 investment. Why would an ILEC desire the replication of its network, when the
16 effect of such a strategy (if successful) would be loss of revenue, and the very real
17 possibility of excess capacity that produces a permanent reduction in the value of
18 its network?

19

20 There is *already* sufficient local switching capacity across the state. The issue
21 here is whether Verizon should make available to competitors local switching

1 capacity at cost-based, wholesale rates so that competitors may offer competitive
2 analog voice services to mass market customers.

3
4 **Q. Are you saying that a CLEC would never choose to install a competitive**
5 **switch?**

6
7 A. No, not at all. There are a number of reasons why a CLEC would decide to install
8 and use a local switch if it were otherwise economically and operationally viable.
9 My point is that there is no reason for the ILEC to encourage that result unless it
10 stood to gain financially by forcing its rival into such an investment.
11 A CLEC leasing switching capacity would still face the appropriate economic
12 incentive to invest, even with the option of unbundled local switching (assuming
13 that the cost to move a loop to a new switch were, at a minimum, as low as
14 acquiring lines via UNE-P).

15
16 **Q. Are entrants precluded from offering new services when they lease switching**
17 **capacity from the incumbent?**

18
19 A. No. First, it is important to emphasize that this proceeding is fundamentally about
20 competition – more precisely, the impairments that would otherwise prevent
21 competition – in the POTS market. The reason that the market is known as “plain
22 old telephone service” is because it is provided over technically standardized

1 facilities, including the circuit switches that have been deployed in the ILEC
2 network. These are *generic* facilities, deliberately engineered to provide a
3 uniform, reliable and predictable customer experience. Whether a carrier leases
4 capacity in a Lucent 5E, Nortel DMS 500, etc. – or purchases and installs an
5 essentially identical Lucent 5E, Nortel DMS 500, etc. – does not fundamentally
6 change the services that can be offered.

7

8 Most new services in the POTS marketplace have generally been the product of
9 pricing and service innovations unrelated to the underlying legacy network.

10 Network-related innovations generally remove the customer from the POTS
11 market, which is defined as basic voice service. The major consumer benefits that
12 result from pricing and service-related innovations – bundling, the elimination of
13 distance from landline pricing, and more personalized customer service, not to
14 mention lower prices – are useful and highly valued by customers. Moreover,
15 competition is showing that there are ways to derive additional value from the
16 existing network, by integrating other services with basic POTS.

17

18 **Q. What are some of the new and different services entrants who lease switching**
19 **capacity from the incumbent offer today?**

20

21 A. CLECs offer services utilizing advanced billing and provisioning systems, as well
22 as services that cross ILEC service territories. Some competitors offer a single

1 price for a local minute of usage, while the ILEC only offers a different price for
2 the first minute and subsequent minutes. Other CLECs offer message-rate or flat-
3 rate pricing in which unlimited local, regional, and long distance minutes are
4 included. Importantly, Verizon now offers a flat-rate service (its Freedom Plan) –
5 only after CLECs began to offer such pricing plans. CLECs have also have begun
6 to offer innovative value-added services, such as voicemail with unified
7 messaging features, which allow customers to receive, store and forward voice
8 messages and faxes in voicemail boxes. These offerings go well beyond
9 competing merely on price or by bundling local and long distance products. Even
10 though the POTs market is shrinking, these integrated features and service plans
11 are sufficient for those customers that only need or want basic telephone service.
12 Without UNE-P, there would be no competition for that segment of the
13 population, and what is ultimately most important – customer choice – would be
14 eliminated.

15
16 **Q. Why would Verizon want to force its competitors to install their own**
17 **switches, thereby increasing the excess supply of switch ports in the market?**

18
19 A. Obviously, an ILEC would not want to force its competitor to make any
20 investment that *improved* its rival's competitive position. The only reason an
21 ILEC would want to encourage "facilities-based" competition would be if it
22 believed that the result would be *less* competition, not more. Indeed, that is the

1 great irony of the ILECs' arguments that additional CLEC investment, especially
2 in current technology, is appropriate or required by the Act.

3
4 Thus, the only rational reason that the incumbents are so interested in forcing their
5 rivals into a switch-based entry strategy is because they expect that the new
6 entrants will fail, and that most UNE-P lines will return to Verizon as retail lines
7 if UNE-P were eliminated.

8
9 **Q. Are there other effects on the ILEC from a forced UNE-P to UNE-L**
10 **migration?**

11 A. Yes. In Massachusetts today, there are more than 150,000 UNE-P lines, spread
12 over 274 wire centers. If each of those lines were actually forced to move to a
13 UNE-L arrangement (assuming *arguendo* that Verizon's claims that it could
14 actually be done successfully from the CLEC's – which is to say the customer's –
15 perspective are correct), there would be a significant impact on Verizon's local
16 network.

17
18 Verizon's network has been engineered with the expectation that all of the traffic
19 from these 150,000 UNE-P lines will originate at the end-office currently serving
20 the line today. Verizon has engineered its interoffice network recognizing that
21 much of this traffic will originate and terminate on lines served by that same end-
22 office (and, therefore, requiring the use of no interoffice facilities). For minutes

1 that do require interoffice transport to other end-offices, Verizon has engineered
2 the shared transport network to efficiently use “first-route” dedicated facilities
3 where justified, with “overflow” traffic relying on tandem-routes during peak
4 periods (or for all traffic from very small end-offices).

5
6 If these minutes are forced into a UNE-L arrangement, however, they would no
7 longer “originate” at the existing ILEC end-office, but instead would “reappear”
8 on interconnection trunks that are located elsewhere in Verizon’s network.
9 Suddenly, the minutes that had terminated directly on lines connected to the same
10 end-office as the customer had been served by, and which had required no
11 interoffice transport, would now need to be transported back to the original end-
12 office. Moreover, the remaining minutes would require that the existing
13 interoffice facilities be augmented to reach destination end-offices, and would
14 frequently rely on tandem-switched transport facilities due to the relatively
15 (compared to the ILEC) small traffic volumes of the CLEC.

16
17 Once again, the bottom line is clear: Verizon would only want to eliminate UNE-
18 P if it was confident that significant impairments actually exist and that the
19 *primary* consequence of a forced migration to UNE-L would be the return of
20 (former) UNE-P lines to Verizon’s retail monopoly.

21
22 **Q. In your view, does the availability of UNE-P encourage investment?**

1

2 A. Yes. This proceeding is about whether CLECs should be allowed to use the
3 legacy LEC network to offer conventional POTS services. Although we disagree
4 generally with the claim that unbundling discourages investment, there should be
5 no debate that sharing the inherited legacy network to offer conventional POTS
6 does not have that effect.

7

8 First, a UNE-P entry strategy (like any business) requires investment –
9 investment in billing systems, computer systems, operational systems, offices
10 and, perhaps most importantly, human capital (or, more colloquially, jobs).
11 There is nothing magical about Class 5 circuit switching equipment that makes
12 having more such investment socially desirable. These switches perform a
13 commodity switching function that is necessary to offer basic POTS, but it is not
14 a facility investment endowed with any particular opportunity for creativity.
15 Indeed, the most useful new function offered by the circuit switch is its important
16 role “... as a means of accessing the local loop” – i.e., the access to customers
17 that makes POTS competition possible through UNE-P.

18

19 Second, where new investment does hold the opportunity of dramatically
20 changing the types of services that a customer receives (such as broadband
21 capability), UNE-P is now the primary voice option for carriers (such as Covad)
22 that are making just such an investment. With the elimination of line-sharing,

1 providers of advanced services can no longer provide their data service over the
2 same loop as the incumbent provides its voice service. Consequently, in order to
3 approach the mass market, these providers require a different “voice partner” so
4 that they may offer data in combination with voice over the same facility (as so
5 many mass market customers desire). Only UNE-P provides that capability in a
6 commercially reasonable manner for the mass market.

7
8 Third, some carriers such as Broadview have built an infrastructure to support
9 customers on UNE-L, but rely on UNE-P to ensure that they can serve all
10 customers in a geographic area, market to customers in areas where they do not
11 have facilities (with the intent of building once densities and economics justify
12 doing so), and support customers whose lines cannot be hot-cut due to feature
13 and/or service limitations, lack of hot-cut processes or the unavailability of copper
14 facilities.

15
16 Finally, the mere fact that a carrier does not invest in Class 5 circuit switching
17 does not mean that it is not investing in other facilities. As noted earlier, AT&T
18 and MCI are two of the largest UNE-P purchasers in the nation, and each have
19 invested billions of dollars in (what are commonly called) long distance
20 networks. Ironically, the RBOCs compete in long distance in *exactly* the same
21 manner that AT&T and MCI (and now Sprint) compete in local markets: leasing

1 wholesale services that provide the generic capability of switching and
2 transmitting voice calls.

3
4 UNE-P is central to mass market competition for basic POTS in the same way
5 that wholesale long distance is central to mass market competition for long
6 distance services. The POTS market is shrinking as customers choose (for
7 themselves, and not under regulatory direction) to move to more advanced
8 services. There is no valid policy reason to encourage additional investment in
9 the generic local exchange facilities that underlie UNE-P. POTS competition is
10 essential, however, to the development of competition for more advanced
11 services where investment is likely. Thus, the relevant question is “will there be
12 more advanced services investment if the POTS market is competitive, or less?”
13

14 **Q. Should the Department expect more investment in advanced services if the**
15 **POTS market is competitive?**
16

17 A. Yes. First, the initial focus of mass market competition is bundling – offering
18 consumers “packages” that combine local and long distance services into a
19 seamless offering. Over time, however, this form of differentiation will reach a
20 competitive balance, and companies will need to find other ways to differentiate
21 themselves and their services. Moreover, as noted earlier, the POTS market is
22 shrinking, with a natural evolution towards more advanced digital services.

1 Consequently, with the market moving away from POTS, and the principal
2 source of POTS differentiation (bundling) losing its advantage, companies will
3 have to respond with different strategies. But it is critical to recognize that the
4 more companies there are in the POTS market today, the more companies there
5 will be who need to differentiate their services in the future, and the more
6 investment (in new technologies, not duplicative facilities) that will result.

7
8 **Q. Assuming that UNE-P remains available, how would you expect to see the**
9 **market evolve in the future?**

10
11 A. As we indicated earlier, UNE-P is part of a natural market transition whose
12 duration is unknown because it is in the hands of customers themselves. The
13 POTS market is shrinking, as customers increasingly desire services with higher
14 bandwidth (for data) or different features. As the market changes, carriers that
15 rely on UNE-P (to one degree or another) will have to evolve in response.

16
17 There are two directions where the evolution appears most likely. The first will
18 be a greater integration of voice/data customers onto shared platforms using soft-
19 switch technology. In lay terms, soft-switches (i.e., software-defined switches)
20 essentially treat voice conversations as a special type of “data” session that is
21 governed by unique instructions. Second, there will be greater innovation in the

1 use of the “advanced intelligent network” (“AIN”) architecture that Verizon has
2 deployed, but which has not yet been fully exploited.

3
4 **Q. Is the “integrated voice/data” evolution you refer to (i.e., VOIP), a part of**
5 **that trend?**

6
7 A. Yes. Voice over Internet Protocol (“VOIP”) refers generally to the provision of
8 voice services in a packet format. While this innovation is clearly exciting, it is
9 still unclear how quickly (and how deeply) the service will fundamentally change
10 customer options. In the near term, for those customers with high-speed data
11 connections, VOIP will likely provide inexpensive alternatives. But it is still
12 unclear how VOIP will really change local market conditions. At this point,
13 VOIP does not reduce the impairments that justify continued access to unbundled
14 local switching to serve mass market customers. Thus, soft-switches and VOIP
15 will become increasingly prevalent in the enterprise market because they (in the
16 first instance) enable the digital pipe to the customer to be used more efficiently.
17 One consequence of this will be that more customers that are mass market today
18 will choose to become enterprise-like customers in the future.

19
20 **Q. Please explain the second evolutionary path you have identified – the use of**
21 **AIN by UNE-P based CLECs.**

1 A. AIN will make possible a different evolutionary path to serve the market of
2 voice-oriented customers. Over the past several years, a silent transformation has
3 been underway in the circuit switched network through the deployment of the
4 AIN. In lay terms, the AIN architecture is a system that moves the software that
5 defines a particular service from the switch itself to a remote database. Various
6 “triggers” (unrelated to those in the TRO) are incorporated into the traditional
7 local switch that, when activated, suspend call processing and signal a remote
8 database (a “Service Creation Point” or SCP) to request an instruction as to how
9 it should proceed. In an AIN environment, service definition is no longer
10 controlled by the switch manufacturer when it releases a generic upgrade to its
11 switch, but rather can be developed by the incumbent or CLEC.

12
13 **Q. Why do you characterize the AIN architecture as affecting a “silent”**
14 **transformation of the network?**

15
16 A. The reason we characterize this as a “silent” evolution is because the architecture
17 is generally underutilized, with few new services being introduced despite the
18 fact that the architecture is now widely deployed. The reason, however, is that
19 the AIN architecture is not yet open to *competitive* innovation and the incentive to
20 deploy new services is different for an incumbent than an entrant. To the
21 incumbent, a new service should produce incremental revenues, largely from

1 existing customers; for a new entrant, however, a service can be justified by its
2 ability to attract new subscribers, even if no discrete revenues are the result.

3
4 For instance, AIN could be used to replace the familiar dial-tone with an
5 announcement (of the time, the weather or even the number of voicemails
6 awaiting action). It is unlikely that an incumbent could charge its customers a
7 higher price based on a different dial tone, but a unique dial tone could be a way
8 for an entrant to differentiate its services from the incumbent.

9
10 We offer these observations not as criticism of Verizon, but rather to again
11 emphasize that competitive differentiation (and consumer benefit) can arise from
12 a variety of strategies, almost none of which require duplication of the Class 5
13 switching hierarchy of the ILEC. It would be far more useful for regulators to
14 assure that the AIN architecture is open. This would allow non-ILEC service-
15 defining databases to be accessed by switch triggers activated on switch ports
16 leased from the incumbent, without creating uneconomic incentives for wasteful
17 duplication of circuit switching investment.

18
19 **Q. So far you have explained the benefits of a competitive POTS market. What**
20 **would be the consequence of Verizon maintaining a POTS monopoly?**

1 A. Having local competitors in the marketplace has forced Verizon to respond to
2 their presence by rolling out innovative services and pricing options. For
3 example, today, as a result of several CLECs having introduced flat-rate pricing
4 plans (including MCI, Z-Tel and InfoHighway), Verizon now offers its Freedom
5 Pricing Plans, which are clearly a response to the offerings provided by
6 competitors. This competition clearly benefits the consumers and businesses of
7 Massachusetts. If Verizon regains its POTS monopoly, its incentive to deploy
8 service innovations will cease and it will enjoy a base of captive customers and
9 revenues that it will be able to leverage against rivals in those narrow submarkets
10 where other entry strategies are beginning to take hold. If the Department wants
11 to see competition in all geographic areas of the Commonwealth, it cannot afford
12 to permit Verizon to leverage its inherited monopoly through narrowly targeted
13 rate reductions or other strategies that foreclose competition in other areas. The
14 only way that competition can thrive and endure is if the core of the incumbent's
15 monopoly – the POTS market – is the beneficiary of aggressive competition.

16
17 **Q. Does this conclude your testimony?**

18
19 A. Yes.